

COMMISSION

ERNST CLOOS
CHAIRMAN
S. JAMES CAMPBELL
RICHARD W. COOPER
G. VICTOR CUSHWA
JOHN C. GEYER

STATE OF MARYLAND



DIRECTOR

KENNETH N. WEAVER

TELEPHONE: 235-0771
235-1792

MARYLAND GEOLOGICAL SURVEY

LATROBE HALL, THE JOHNS HOPKINS UNIVERSITY
BALTIMORE, MARYLAND 21218

E7.3 10433

CR-13/223

"Made available under NASA sponsorship
in the interest of early and wide dis-
semination of Earth Resources Survey
Program information and without liability
for any use made thereof."

May 8, 1973

(E73-10433) SURVEY OF GEOLOGY, MINERAL,
AND WATER RESOURCES Progress Report
(Johns Hopkins Univ.) 6 p HC \$3.00

N73-22276

CSCL 08G

Unclas

G3/13 00433

Progress Report:

- A. Maryland Geological Survey, "Survey of Geology, Mineral, and Water Resources", project 401
- B. Dr. Kenneth N. Weaver, UN277
- C. Authorized equipment according to contract NAS 5-21848 are a light table and a photo print and transperence enlarger viewer. The light table was purchased and received on December 28, 1972. The viewer enlarger proved to be of little or no use therefore, it has been returned to the supplier. Payment for the viewer enlarger had not been made, therefore, approximately \$785.00 of the contract allowance of \$2,200 has not been expended. Effort has been made with NASA officials to obtain a viewer enlarger either by loan or purchase of a more expensive, suitable type but we have met with little success. Facilities at Wallops Island have been made available to us.

Essentially, this program report covers the period January 1, 1973 to date.
- D. During the period January 1, 1973 to date, underflight data has been inspected using the Richards roll film viewer. Underflight data was requested on a seasonal basis in order to record seasonal trends of near and onshore Chesapeake Bay and Atlantic Ocean structural features. High altitude underflight data is being used to map strip mining operations in Western Maryland and in geologic mapping of Baltimore County, Maryland. This type of flight data is also being utilized as an aid in a wildlife environment-management program and in a coastal zone management program by the Maryland Department of Natural Resources. ERTS-I imagery is being used as a supplemental aid in geologic mapping of portions of Frederick County, Maryland. It is anticipated that continuous use of ERTS

imagery and underflight data for the mentioned endeavor will be continued through the remaining period of the contract.

- E. ERTS underflight data has been used specifically in a study of a beach environment at the "Flag Ponds", south of Long Beach, Calvert County, and of Janes Island State Park, Somerset County. Beach and nearshore depositional features for most of the main shoreline of the Chesapeake Bay have been mapped. Seasonal changes of littoral transport and beach width have been studied at three sites in the Chesapeake Bay and the Atlantic Coast from Ocean City inlet to the Maryland-Delaware line.
- F. On March 7, 1973, at the ERTS-I Symposium, the following papers were presented:
"Recognition of Beach and Nearshore Depositional Features of Chesapeake Bay" by: Randall T. Kerhin

"Seasonal Changes of Littoral Transport and Beach Width and Resulting Effect on Protective Structures"
by: Turbit H. Slaughter
- G. No recommendations
- H. No changes
- I. Attached is a copy of ERTS Image Descriptor lists submitted on August 25, 1972 and April 25, 1973.

-2-

ERTS IMAGE DESCRIPTOR FORMS

Mailed to:

ERTS USER SERVICES
Code 563
Bldg 23 Room E413
NASA GSFC
Greenbelt, Md. 20771

August 25, 1973

Dr. Kenneth N. Weaver

MMC 401

Maryland Geological Survey

	sediment estuary		
107915133-4	x	x	Barrier Island
107915133-5	x	x	
107915133-6		x	Coastal Plain
107915133-7		x	Coastal Plain
113315141-5	x	x	Barrier Island
113315141-6		x	Coastal Plain
113315141-7		x	Coastal Plain
113315135-M			Barrier Island
113315144-5	x	x	Barrier Island
113315144-6,7			
1132-15085	x		Continental Shelf
117015193-5	x	x	
117015193-7			Fall Line
118715140-5	x	x	Barrier Island
118715142-5	x	x	

April 25, 1973

Dr. Kenneth N. Weaver

MMC 401

Maryland Geological Survey

117015191-7

Canal
Gap
Lineament
Meander
Piedmont
Synclinal Valley
Mountain
City
River

117015200-7

Swamp
Agriculture
Highway
City
Lake
Estuary
Dendritic drainage

117115245-7

Mine
Synclinal Valley
Anticlinal Valley
Meanders
Mountain

117115252-7

Jetstream
Cirrus
Lake
Agriculture
Mountain
Synclinal Valley

117215303-6,7

Cumulus
Mountain
Anticlinal Valley

April 25, 1973

Dr. Kenneth N. Weaver

MMC 401

Maryland Geological Survey

113415202-6,7

Dendritic drainage
Piedmont
Coastal Plain
Silt
Estuary
Meander

111815312-6,7

Dendritic drainage
Folds
Plateau
Mountain

April 25, 1973

Dr. Kenneth N. Weaver

MMC 401

Maryland Geological Survey

117215310-6,7

Dendritic drainage
Lineaments
Folds
Mountains

109915255-6,7

Silt
Mountains
Dumulus
Lake
Piedmont

109915252-MSS

Cumulus
Synclinal Valley
Mountains
Piedmonts

111615192-6,7

Synclinal Valley
Gap
Canal
Lineament
Cirrus
Mountain
Piedmont

117215312-6,7

Lake
Mountain
Synclinal Valley
Anticlinal Valley
Piedmont
Dendritic drainage
Lineament